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ABSTRACT

A research study examined change in the quantity of leisure participation attributable to conversion from a five to a four-day workweek. Change in quantity was defined as (1) frequency change or change in the amount of time devoted to leisure, (2) activity change or change in the number of different leisure activities pursued, and (3) perceptual change or change in the respondent's perception of the amount of time devoted to leisure. A questionnaire was mailed to employees of two insurance companies, one using a standard five-day schedule and the other using a four-day schedule. Analysis was based on 123 respondents working a four-day week and 103 respondents working a five-day week. It was found that both groups of workers devoted approximately equal amounts of time to leisure participation. However, within the equal time frames, four-day workers pursued a greater number of different leisure activities than five-day workers. (Author/AV)

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THE FOUR-DAY WORKWEEK: AN ASSESSMENT OF ITS EFFECTS ON LEISURE PARTICIPATION

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The 4-day workweek is emerging as a popular alternative to the conventional 5-day schedule (Kando 1975; McEvoy 1974; Poor and Steele 1972; Wheeler et al. 1972; Samuels 1971; Kahn and Wiemer 1967; Faunce 1963). Conversion to a 4-day workweek entails the restructuring of work time. The number of days worked each week is reduced, while the total number of hours worked may remain unchanged. The result is an expanded block of nonwork time, with workers exchanging longer daily periods of work time for an additional day, or half-day, free of work obligations.

This restructuring of work time accompanying conversion to a 4-day workweek introduces new problems in the analysis of the relationship between work and leisure. Past analyses of the work-leisure relationship have concentrated on the nature of the task performed, rather than the structure of work time, and its effects on workers' leisure behavior (Kando and Summers 1971; Witt and Bishop 1970). The consequences of restructuring work time for leisure participation remain largely unexamined. The research reported in this article addressed this question by examining change in the quantity of leisure participation attributable to conversion from a 5- to a 4-day workweek.

Previous investigators have found that, following conversion to a shorter workweek, affected workers increased their actual leisure participation (McEvoy 1974; Poor and Steele 1972) and perceived an increase in this participation (Goodale and Aagard 1975). Interpretation of these findings, however, is confused by several methodological deficiencies. First, two of the studies examined only samples of 4-day workers (Goodale and Aagard 1975; Poor and Steele 1972). Comparison of comparable 4- and 5-day work groups, however, is necessary to definitively isolate the independent effects of a

change in work schedule on leisure participation. It is possible that increases in leisure and recreational participation may be occuring for all workers independent of the structure of their respective workweeks. The findings of Goodale and Aagard (1975) and Poor and Steele (1972) could reflect this overall trend rather than isolating changes specifically attributable to a 4-day workweek. Although McEvoy (1974) did attempt a comparative design, his findings must be viewed with caution. His comparison of university personnel with a national sample raises the question of occupational comparability. Persons employed in a university setting may place greater value on leisure experiences, and thus may participate more frequently in these activities than persons working in other settings. Furthermore, McEvoy's use of 1974 (4-day sample) and 1964 (comparison sample) data leaves open the possibility that the leisure changes of 4-day workers reflect a general trend toward greater leisure-recreational participation.

A second limitation of previous research has been the failure to consider the causal effects of variables other than the structure of the workweek. Increased leisure participation revealed in past research may have been produced by factors other than change in the structure of the workweek (i.e. age, income level, family structure). To isolate the independent effect of a change in work schedule, possible intervening variables must be identified and controlled.

Finally, some past research has relied on the measurement of leisure participation at one point in time, asking respondents to assess change in their leisure-recreational participation following conversion to a 4-day week. A better approach would be to use before-after measures of leisure participation. From a practical standpoint, however, such data are difficult to obtain and necessitate an appropriate time interval built into the study

design. An alternative approach is to ask respondents to recall their frequency of leisure participation before conversion and then to assess their current participation. Differences between these two measures could be used to provide a measure of leisure participation change.

Statement of Research Problem

This research assessed changes in leisure participation resulting from conversion to a 4-day workweek. This assessment was based on a comparison of changes over a five-year period in the leisure participation of persons working 4- and 5-day workweeks. Three types of change in leisure participation were examined. First, "activity change" reflecting changes in the number of different leisure activities in which workers participated. Second, "frequency change" measured changes in the amount of time spent in leisure participation. Finally, "perceptual change" referred to workers' perceptions of change in the frequency of their leisure participation.

Although the leisure participation of all workers (4- and 5-day groups) was expected to change over time, conversion to a 4-day week was expected to result in more frequent overall participation and involvement in a greater number of different leisure activities than was possible for those working a 5-day schedule. This expected increase in leisure participation of 4-day workers also should be reflected in their perceptions of increased participation relative to the perceptions of their 5-day counterparts.

Procedures

Data reported in this study were obtained from employees of two insurance companies in a midwestern city. The first company was selected for study because of its conversion in 1971 from a 5- to a 4-day workweek. Employees

of this company worked 9½-hour days, Monday through Thursday, for a 38-hour workweek. The second company employed workers on a standard 5-day week, with employees working 8-hour days, Monday through Friday, for a 40-hour workweek. The names and home addresses of person employed by the two companies were obtained from the Polk City Directory (1975) which identified 211 persons as being employed by the 4-day company and 279 persons as employed by the 5-day company.

Data were obtained from a questionnaire mailed to the home address of the potential respondent. Data collection began in January, 1976, using a three-wave mailing procedure including: (1) an initial questionnaire and cover letter; (2) a follow-up postcard; and (3) a replacement questionnaire and cover letter. This daca collection technique resulted in the return of 154 (73 percent) of the 211 questionnaires delivered to 4-day employees and 135 (45 percent) of the 297 questionnaires sent to employees of the 5-day company.[1] Thirty-one of the 4-day and 32 of the 5-day respondents were dropped because they were no longer employed by the two insurance companies. Therefore, analysis was based on 123 respondents working a 4-day week and 103 respondents on a 5-day week.

Leisure-Change Variables: Changes, over a five-year period, in three dimensions of leisure participation were assessed. First, "activity change" provided a measure of net change in the number of different leisures activities pursued and reflected the degree of diversity in the respondents' leisure participation. Activity change was measured by a list of 36 leisure activities derived from McKechnies' Leisure Activities Blank (McKechnie, 1974).[2] This list taps a variety of leisure pursuits while still being of a manageable length for survey purposes. Respondents first were asked to indicate activities in which they participated in the past (five years ago)

and, second, to indicate activities in which they currently participated. Change scores were determined by subtracting the total number of past activities from the total number of present activities. Scores ranged from -11 (a decrease of 11 activities) to +12 (an increase of 12 activities), with a mean of zero, or no change.

Second, "frequency change" provided a measure of change in the total amount of time devoted to leisure participation. Frequency change was measured by asking respondents to indicate their frequency of past and present participation in each of the 36 listed leisure activities. The response format and scoring procedure were: (1) "daily" (365 points); (2) "about once a week" (52 points); (3) "about once a month" (12 points); (4) "less than once a month" (one point); and (5) "not at all" (no points). Past and present participation scores were separately summed, with frequency change scores determined by subtracting the frequency of past participation from the frequency of present participation. These change scores ranged from -1827 to 3207, with a mean of 115.

Finally, "perceptual change" was measured by asking respondents to assess the overall magnitude of change in the frequency of their leisure participation over the past five years. The response format was "greatly decreased," "somewhat decreased," "stayed about the same," "somewhat increased," and "greatly increased." The distribution of 4- and 5-day respondents on each of the three leisure change variables are reported in Table 1.

Measurement of the leisure change variables was based on recall data, with respondents asked to estimate past leisure behavior. Recall techniques present a methodological problem in that accurate estimates of past behavior may be difficult, or may be colored by present behavior. The use of recall data, however, is common in the leisure literature (Goodale and Aagard, 1975; Yoesting and Burkhead, 1973; Hellriegel, 1972). Recent findings

indicate that recall techniques can provide accurate information. For example, in their comparison of recall measures and time-budget diaries, Bishop et al.(1975) found that 77 percent of the variance in frequency of participation in leisure activities could be explained by recall data.

Control Variables: Previous research has shown that several socio-demographic characteristics are related to leisure participation. Some of the more prominent variables include age, family income, educational attainment, occupational prestige, and family size (Nord and Costigan, 1973; Burch, 1969; Gaitz and Gordon 1972; Morris et al., 1972; Hendee et al., 1968). To the extent that the 4- and 5-day workers differ on these variables, participation differences between the work groups may be attributable to the effects of these variables rather than to variation in the structure of the workweek. Similarly, while 4- and 5-day work groups may reveal systematic variation in their socio-demographic characteristics, they also may display significant differences in their past levels of leisure participation. Changes in leisure participation may be a function of these initial differences in participation rather than resulting from a restructuring of the workweek.

In addition to work schedule, five socio-demographic and two leisure participation variables were examined in the analysis as possible factors contributing to the expected leisure change differences betwen 4- and 5-day workers. Variables included in the analysis were age, family income, educational attainment, occupational prestige, family size, past number of leisure activities, and past frequency of leisure participation. Age was measured by respondents' self-reported age and ranged from 19 to 63. Family income was obtained by having respondents indicate within predetermined

categories their family income before taxes in 1975. The income categories ranged from "less than $5,000" to "more than $30,000." Educational attainment was measured by having respondents circle the category which best reflected their educational experience. These categories ranged from "attended high school but did not graduate" to "attended graduate school." Occupational prestige was measured by asking respondents to indicate their present type of work, or job title, at the company where they were employed. Responses were coded into five categories representing five occupational status levels. These categories ranged from "maintenance and service personnel" to "company officials and professional personnel." Family size was measured by adding the number of children under 18 living with the respondent and, in the case of married respondents, the spouse. Past number of leisure activities and past frequency of participation were operationalized using the past participation scores comprising the activity and frequency change variables. Past number of leisure activities ranged from eight to 36 and past frequency of participation ranged from 60 to 4493.

Findings

It was found that the leisure participation of many respondents had changed over the time period investigated in this study. Substantial activity, frequency, and perceptual changes in leisure participation were revealed, with the trend of these changes being generally toward increased leisure participation for both 4- and 5-day workers (see table 1).

While leisure participation was expected to change over time, it was hypothesized that variation in work schedule would have a significant effect on this change in participation. Specifically, it was hypothesized

that the 4-day group would display a greater increase than the 5-day group in the activity, frequency, and perceptual change measures. The hypotheses were tested using one-way analysis of variance (Table 2).

A significant difference, at a probability level of .05 or greater, in the activity change scores or 4- and 5-day workers was found. This difference was in the hypothesized direction, with 4-day workers displaying an increase in the number of different activities pursued, while the 5-day group displayed a slight decline.

Statistically significant differences were not obtained between the two work groups for either frequency or perceptual changes. Both work groups had increased the frequency of their leisure participation, with the increase being only slightly greater for 4-day than 5-day workers. Furthermore, both groups perceived that the frequency of their leisure participation had increased with the extent of this perceptual increase being approximately equal for the two groups.

Although there was a significant difference in the activity change scores of 4- and 5-day respondents, the extent to which this difference was a function of differential work schedules is unclear. In an attempt to determine the independent effect of work schedule on leisure participation change, the potential effects of seven variables were controlled. T-tests were used to test the significance of differences between the mean scores of the two work groups on each of the control variables. Data reported in Table 3 indicate that the 4- and 5-day groups differed significantly on three variables: age, family size, and past number of leisure activities. Four-day workers were older than 5-day workers. Also, 4-day workers had

larger families and pursued significantly fewer leisure activities in the past than the 5-day group. No significant differences were found between the two groups in family income, education, occupation, and past frequency of leisure participation. Since the two work groups were not comparable in age, family size, or past number of leisure activities pursued, the revealed differences in activity change may be reflective of the influence of these factors rather than the different work schedules.

To assess whether or not activity changes were a function of differences in age, family size, or past number of activities pursued, Pearsonian correlations were obtained between these variables and the activity change measure. While family size and activity change were not significantly related ($R = .07$), significant inverse relationships with activity change were revealed for both age ($R = -.13$) and past number of activities pursued ($R = -.29$).

Analysis of covariance and multiple classification analysis were used to examine the relationship between work schedule and activity change while adjusting for the effects of age and past number of leisure activities (Table 4). Analysis of covariance adjusted for the effects of variation produced by the extraneous variables (age and past number of activities) before the effects of work schedule on activity change were assessed. Multiple classification analysis provided a measure of deviation from the grand mean of the activity change variable for the two work groups before and after adjusting for the effects of the extraneous variables. The statistic eta indicates the proportion of variation in activity change explained by work schedule and may be compared to a correlation coefficient. Beta values may be viewed as standardized regression coefficients (Nie et al., 1975).

As indicated in Table 4, age and past number of activities significantly affected the relationship between work schedule and activity change. When the effects of these extraneous variables were controlled, the two work groups demonstrated a wider gap in activity change. Prior to adjusting for the effects of the extraneous variables, deviation from the grand mean was -.45 for the 5-day group and .39 for the 4-day group, with 14 percent of the variance in activity change explained by work schedule. After adjusting for age and previous participation differences, deviation from the grand mean increased to -.63 for the 5-day group and to .54 for the 4-day group, with 19 percent of the variance in activity change explained by work schedule. Age and past number of leisure activities, therefore, functioned as suppressor variables; once their influence was removed, the activity change gap between the 4- and 5-day groups was widened.

Discussion

Numerous authors have acclaimed the arrival of the shorter workweek, maintaining that it provides expanded blocks of nonwork time that can be devoted to the pursuit of leisure and "the good life." The expectation has been that the shorter workweek would bring an increased frequency of leisure participation and a greater indulgence and gratification of leisure tastes and interests now thwarted by the demands of a longer workweek. Conversion to a shorter workweek, however, was shown to have had little effect on the frequency of the respondents' leisure participation. Over the past few years, the 4- and 5-day work groups experienced increases in both the actual and perceived amount of time they devoted to leisure and recreational experiences. Four-day, as compared to 5-day, workers, however,

were found to participate in a greater variety of leisure activities. Thus, it appears from these data that while a shortening of the workweek did not increase the amount of time workers' devote to leisure experiences, it did provide them with an opportunity to pursue a greater diversity of leisure activities.

The effects of a restructuring of work time on leisure participation may be viewed as a change in leisure content rather than leisure time. That is, 4- and 5-day workers devote approximately equal amounts of time to leisure participation. Within these equal time frames, however, 4-day workers pursue a greater number of different leisure activities than 5-day workers. It may be that this change in leisure content rather than leisure time is a result of the removal of certain barriers to leisure participation brought about by conversion to a 4-day week. The 4-day, as opposed to 5-day, worker may be provided with the choice of a greater diversity of leisure activities. For example, activities that require some long range planning, such as camping, travel, and entertaining, may be more feasible given an expanded time frame. Four-day workers may also find that they are now able to participate in on-going weekday family activities (i.e. swimming, shopping, bicycling) in which they had not been included while working a 5-day schedule. In addition, the 4-day workers initially may experience a form of "experimental leisure." They may view conversion to a 4-day week as providing an opportunity to sample a variety of leisure activities to determine which are most enjoyable and meet their individual needs. As time passes, they may devote more time to fewer activities, settling into a pattern comparable to that experienced by 5-day workers.

The 4-day workweek constitutes a new trend in the structure of work time. The research reported here was addressed to the effects of a shorter workweek on the use of leisure time. It was concluded that the 4-day week enhanced the diversity, but not the frequency, of workers' leisure experiences. There are many other areas of life besides leisure and recreational participation that may be affected by the restructured workweek. Family life, attitudes toward retirement, and community involvement, for example, may be affected by the compression of work time into four, rather than five, day periods. None of these potential impacts has received systematic attention. While any social trend deserves comment, certainly the restructuring of a major social institution, such as work, demands systematic and rigorous study.

Footnotes

1. Following the first mailing, concern was expressed by management at the 5-day company about the project. In light of this concern, which threatened the success of the study, employees of the 5-day company were not included in the final two steps of the data collection process. The lower response rate for the 5-day company is attributed to differences in the number of mailings received by the two groups.
2. Leisure activities used in this research and drawn from McKechnies' Leisure Activities Blank (McKechnie, 1974): Shopping for pleasure; going to parks or playgrounds; visiting museums or playgrounds; visiting museums or galleries; attending movies; church activities; club participation; spending time in taverns or nightclubs; visiting amusement parks or zoos; attending parties; visiting friends; attending athletic events; picnicking; riding in auto for pleasure; collecting stamps, coins, etc.; working around the house or yard; spending time with family members; hobbies; reading books, magazines, newspapers; listening to records or radio; watching television; boating; swimming; camping; bicycling for pleasure; fishing; hunting; participate in athletic events; hiking or walking for pleasure; playing cards or board games; attending concerts, lectures, plays; traveling for pleasure; attending college or adult education classes; volunteer work; political activities, entertaining friends in your home; rest, relax, loaf.

Table 1. Percentage Distributions of Four- and Five-Day Workers for Leisure Change Variables.

Leisure Change Variables	4-Day Group	5-Day Group	Total
Activity Change	(N=119)	(N=102)	(N=221)
Large decrease (3+)	4	21	13
Small decrease (1-2)	8	22	14
No change	48	18	34
Small increase (1-2)	25	22	24
Large increase (3+)	15	17	15
Total	100	100	100
Frequency Change	(N=111)	(N=102)	(N=213)
Large decrease (-365 or more)	5	18	12
Small decrease (-1 to -364)	9	33	20
No Change	19	4	13
Small increase (1 to 364)	38	22	30
Large increase (365 or more)	29	23	25
Total	100	100	100
Perceptual Change	(N=123)	(N=102)	(N=225)
Greatly decreased	3	5	4
Somewhat decreased	6	20	12
Stayed about the same	42	27	35
Somewhat increased	38	40	39
Greatly increased	11	8	10
Total	100	100	100

Table 2. Analysis of Variance of Activity, Frequency, and Perceptual Change Scores for 4- and 5-Day Workers.

Change	N	$\bar{X}$	F	df	P<
Activity Change					
4-Day	119	.71	3.68	1/219	.05
5-Day	102	-.08			
Frequency Change					
4-Day	111	176	2.67	1/211	NS
5-Day	102	49			
Perceptual Change					
4-Day	123	3.39	3.06	1/223	NS
5-Day	102	3.26			

Table 3. Comparability of 4- and 5-Day Groups on Selected Control Variables

Control Variables	N	$\bar{X}$	T	df	P<
Age					
4-Day	120	41.9	-5.95	221	.000
5-Day	103	32.7			
Family Income					
4-Day	112	4.0	-1.88	210	NS
5-Day	100	3.6			
Education					
4-Day	121	3.6	1.43	220	NS
5-Day	101	3.9			
Occupation					
4-Day	121	2.6	1.34	220	NS
5-Day	101	3.8			
Family Size					
4-Day	123	2.1	-2.32	224	.02
5-Day	103	1.4			
Past Number of Activities					
4-Day	120	21.7	2.44	220	.01
5-Day	102	23.5			
Past Frequency of Participation					
4-Day	112	1605	0.40	212	NS
5-Day	102	1644			

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